REMARKS

In response to the Office Action mailed October 7, 2003, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following remarks, and have added new claims. The claims as now presented are believed to be in allowable condition.

Claims 1-31 were pending in this Application. By this Amendment, claims 32-42 have been added. Accordingly, claims 1-42 are now pending in this Application. Claims 1, 5, 9, 11, 15, 19, 21, 41 and 42 are independent claims.

Preliminary Matters

Please note that Applicants cannot find any copy of a signed PTO-1449 in Applicants records regarding the cited Rickard reference. Perhaps the signed PTO-1449 was either inadvertently lost or omitted in response to an earlier-filed IDS.

Applicants have provided a new copy of the PTO-1449 form citing Rickard, which is a copy from Applicants' file. Applicants respectfully request that Examiner Shah complete and return the PTO-1449 form in the next correspondence from the Patent Office.

Rejections under §103

Claims 1, 4, 5, 8, 9, 11, 14, 15, 18, 19, 21 and 24-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over a publication entitled "MAPPING THE INTERNET WITH TRACEROUTE" (Rickard) in view of U.S. Patent No. 5,898,671 (Hunt et al.). Claims 2, 6, 10, 12, 16, 20 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rickard in view of Hunt and in further view of U.S. Patent No. 6,535,523 (Karmi). Claims 3, 7, 13, 17 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rickard in view of Hunt and in further view of U.S. Patent No. 5,926,463 (Ahearn).

Applicants respectfully traverse each of these rejections and request reconsideration. The claims are in allowable condition because they patentably distinguish over the cited prior art.

Rickard discloses a command line program which runs on a machine called TRACERT (page 2, last line through page 3, first line). To use this program, a user enters a command ("TRACERT") and an intended host ("WWW.BOARDWATCH.COM") (page 6, lines 1-4) which results in a DNS lookup. After the DNS lookup, the sending machine sends out three packets with their Time-To-Live (TTL) value set to 1 (page 6, lines 4-8). Upon arrival of the packets at a first router, the first router decrements the TTL value which now equals zero resulting in the first router issuing, back to the sending machine, an ICMP TIME EXCEEDED IN TRANSIT error message including the original time stamp and the IP number of the router sending the error message (page 6, lines 8-12). The original sending machine receives the ICM error message and notes the time of receipt as well as the IP number of the router that sent it (page 6, lines 12-14). The original sending machine then examines the time stamp information, and calculates the round trip transit time in milliseconds (page6, lines 14-18). The original sending machine then increments the TTL value and repeats this process (page 6, paragraphs 2-4). When the packets actually reaches the intended host, the host reads the packet's destination port number which is a ridiculously implausible port number (usually 33,434) but in any case something not ever recognized as a port (page 6, last paragraph). Port 33,434 is not only not one of the normal ports, but it is not likely to ever be (page 7, lines 1-2). In response, the intended host issues a "PORT UNREACHABLE" ICMP error message which, upon receipt by the original sending machine, terminates TRACERT (page 7, lines 2-5).

Hunt discloses a flow control technique for wider area ATM networks in which a receiver switch periodically transmits, to a transmitter switch, feedback messages indicative of the state of fullness of receiver switch buffers (column 2, lines 1-3 and Abstract). The transmitter switch then calculates an updated receiver buffer state and transmits cells accordingly (column 2, lines 10-11 and Abstract). Once the updated receiver buffer state is calculated, transmission of cells from the transmitter switch to the receiver switch is controlled in the transmitter switch based upon an allocation technique (column 2, lines 20-23 and Abstract).

Karmi discloses a system for sharing a resource among a set of users (column 2, lines 2-4). Each user has a usage rate selected from a set of variable rates, and each user's use of the resource is determined at least in part by the user's usage rate (column 2, lines 4-6). Each user also has a set of persistent vectors, each vector element corresponding to a rate among the set of available rates (column 2, lines 6-8). Selection of a user's usage rate from the set of available rates is based at least in part on one among the set of persistent vectors (column 2, lines 8-11). Fig. 4 of Karmi shows a system having a control unit 460 which receives information related to usage of resource 400 by users 420a-d (for example, current rate of use by one or more users, history of use by one or more users, reserve capacity available, predicted capacity, status of the resource, information relating to scheduled or unscheduled events that may affect resource capacity or status, etc.) (column 8, lines 40-47 and Fig. 4).

Ahearn discloses a method and apparatus for viewing the configuration of a computer network (column 3, lines 3-8). In order to collect information to determine the critical paths from one workstation to another, the Ahearn invention uses a tool called the "BA Traceroute tool," (column 20, lines 65-67). The router operates by sending out a packet to the destination address with a TTL set to 1 (column 21, lines 1-2). The first hop then sends back an ICMP error message indicating the packet could not be delivered because the TTL expired (column 21, lines 2-4). The packet is then resent with a TTL set to 2 (column 21, lines 4-5). The second hop then sends back an ICMP message indicating the TTL expired (column 21, lines 5-6). The process continues until the destination address is reached (column 21, lines 6-7).

Claims 1-4 and 25

Claim 1 is directed to a method for obtaining resource usage information from a node of a network. The method includes the step of generating, for a data element, a value for a parameter within the data element that will cause the node of the network to determine that the data element is stale when the node of the network receives the data element. The method further includes the steps of sending the data element to the node of the network, and receiving a signal from the node of the network. The signal

includes (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network.

In order to establish a *prima facie* case of obviousness, the Office Action must meet three criteria.

> "First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."[1]

The Office Action, however, has not established a *prima facie* case of obviousness with respect to claim 1 for several reasons. First, there is no suggestion or motivation to modify or to combine the reference teachings. Second, even if such a modification or combination is made there is no reasonable expectation of success. Third, even if one were to argue that the modification or combination is successful, the result would not include all of the claim limitations of claim 1. Each of these reasons will now be elaborated on.

The cited prior art does not teach or suggest, either alone or in combination, a method for obtaining resource usage information from a node of a network which involves sending a data element to the node and receiving, from the node, a signal including (i) an indication that the node has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node, as recited in claim 1. Rather, Rickard discloses a command line program which sends out packets and receives standard "TIME EXCEEDED IN TRANSIT" and "PORT UNREACHABLE" ICMP error messages (e.g., see page 6, lines 8-12 and page 7, lines 2-5 of Rickard). If one were to argue that Rickard's ICMP error messages are the signal of claim 1, there is no resource usage information describing usage of resources within a node, as recited in claim 1. In further contrast to claim 1, Hunt discloses a flow control

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[1]   *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

technique for wider area ATM networks in which a receiver switch periodically transmits, to a transmitter switch, feedback messages indicative of the state of fullness of receiver switch buffers (see column 2, lines 1-3 and Abstract of Hunt). Clearly, Hunt's feedback message is not a signal including (i) an indication that a node has removed a data element from a network, and (ii) resource usage information describing usage of resources within the node, as recited in claim 1.

As the basis of the rejection of claim 1, the Office Action contends on page 2, last paragraph that Rickard fails to disclose a second signal including resource usage information describing usage of resources within a node of a network. Although claim 1 does not require a second signal as contended by the Office Action, Applicants nevertheless agree with this contention.

Additionally, the Office Action further contends on page 2, last paragraph through page 3, first paragraph that Hunt's feedback messages could contain the number of available resources, the number of cells held for each connection or the number of resources freed and thus it would have been obvious to modify Rickard to include the teachings of Hunt. Applicants respectfully submit that regardless of whether this contention is true, the rejection under 35 U.S.C. §103(a) in view of this line of reasoning is improper for the following reasons:

First, Applicants respectfully submit that there is no suggestion or motivation to modify or to combine the reference teachings. Rickard relates to mapping the Internet with TRACERT using packets. On the other hand, Hunt relates to controlling flow of ATM cells in ATM networks. It is unclear why one would want to combine the teaching of one reference with the other. For example, why would one want to map an ATM network using packets? Additionally, why would one want to control flow of ATM cells using TRACERT on the Internet? If the rejection of claim 1 under 35 U.S.C. §103(a) is to be maintained, Applicants respectfully request that it be pointed out with particularity where either reference provides such a teaching.

Additionally, even if a modification or combination is made there is no reasonable expectation of success. In particular, Applicants respectfully submit that Rickard discloses a command line utility where a user enters a command into a sending

machine and the sending machine eventually receives ICMP error message, while <u>Hunt</u> discloses periodically transmitting from a receiver switch to a transmitter switch feedback messages indicative of the state of fullness of receiver switch buffers. Hypothetically, if the user in <u>Rickard</u> enters a TRACERT command hoping to receive an ICMP error message, it is unlikely <u>Hunt's</u> receiver switch could be modified to provide an ICMP error message including the state of fullness of receiver switch buffers. For example, if <u>Rickard's</u> TRACERT command specifies unrecognized port number 33,434 to cause nodes to respond with ICMP error messages, how could <u>Hunt's</u> receiver switch respond with an error message but also respond in a non-error-handling manner and the state of fullness of receiver switch buffers? If anything, it would seem that <u>Hunt's</u> receiver switch would respond to the unrecognized port number 33,434 by providing an error message back, and not provide state of fullness information. On the other hand, if <u>Hunt's</u> receiver switch recognized the port number 33,434, why would it respond with an error message? Accordingly, there is no reasonable expectation of success of a modification or combination is made.

Furthermore, even if one were to argue that the modification or combination is successful, the result would not include all of the claim limitations of claim 1. For example, suppose that <u>Rickard's</u> sending machine and <u>Hunt's</u> receiver switch existed in the same network. Also suppose that (i) <u>Hunt's</u> receiver switch periodically provides feedback messages including the state of fullness of receiver switch buffers, and (ii) TRACERT command of <u>Rickard's</u> sending machine caused <u>Hunt's</u> receiver switch to provide an ICMP error message. In this hypothetical situation, the result would be two separate types of signals, i.e., periodic feedback messages and an ICMP error message. In contrast, claim 1 recites a method having a step of receiving a signal including (i) an indication that a node has removed a data element from a network, and (ii) resource usage information describing usage of resources within the node. Accordingly, even if one were to argue that the modification or combination is successful, the result would not include all of the claim limitations of claim 1.

Applicants further respectfully submit that <u>Karmi</u>, which the Office Action contends teaches receiving information related to usage of resources, does not teach or

suggest how one could modify Rickard and Hunt to obtain a proper rejection under 35 U.S.C. §103(a) of claim 1. Similarly, Applicants further respectfully submit that Ahearn, which the Office Action contends teaches managing configurations of a computer network, does not teach or suggest how one could modify Rickard and Hunt to obtain a proper rejection under 35 U.S.C. §103(a) of claim 1.

For the reasons stated above, claim 1 patentably distinguishes over the cited prior art, and the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn. Accordingly, claim 1 is in allowable condition.

Because claims 2-4 and 25 depend from and further limit claim 1, claims 2-4 and 25 are in allowable condition for at least the same reasons.

Claims 5-8 and 26

Claim 5 is directed to an apparatus for obtaining resource usage information from a node of a network. The apparatus includes a network interface for connecting to the network, and a controller coupled to the network interface. The controller is configured to generate, for a data element, a value for a parameter within the data element that will cause the node of the network to determine that the data element is stale when the node of the network receives the data element. The controller is further configured to send the data element to the node of the network through the network interface, and receive a signal from the node of the network. The signal includes (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network.

The cited prior art does not disclose an apparatus for obtaining resource usage information from a node of a network where the apparatus uses a signal including (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network, as recited in claim 5. Rather, as explained above in connection with claim 1, (i) the cited prior art does not teach or suggest, either alone or in combination, such an apparatus and (ii) the rejection under 35 U.S.C. §103(a) is improper. Thus, claim 5

patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 5 under 35 U.S.C. §103(a) should be withdrawn. Therefore, claim 5 is in allowable condition.

Because claims 6-8 and 26 depend from and further limit claim 5, claims 6-8 and 26 are in allowable condition for at least the same reasons.

Claims 9-10 and 27

Claim 9 is directed to a computer program product that includes a computer readable medium having instructions stored thereon for obtaining resource usage information from a node of a network. The instructions, when carried out by the computer, cause the computer to perform the step of generating, for a data element, a value for a parameter within the data element that will cause the node of the network to determine that the data element is stale when the node of the network receives the data element. The instructions further cause the computer to perform the steps of sending the data element to the node of the network, and receiving a signal from the node of the network. The signal includes (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network.

The cited prior art does not disclose a computer program product that includes a computer readable medium having instructions stored thereon for obtaining resource usage information from a node of a network using a signal including (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network, as recited in claim 9. Rather, as explained above in connection with claim 1, the cited prior art does not teach or suggest, either alone or in combination, such an computer program product and the rejection under 35 U.S.C. §103(a) is improper. As a result, claim 9 patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 9 under 35 U.S.C. §103(a) should be withdrawn. Thus, claim 9 is in allowable condition.

Because claims 10 and 27 depend from and further limit claim 9, claims 10 and 27 are in allowable condition for at least the same reasons.

Claims 11-14 and 28

Claim 11 is directed to a method for providing resource usage information. The method includes the steps of receiving a data element from a source computer of the network, determining that the data element is stale based on a parameter within the data element, and removing the data element from the network and sending a signal to the source computer of the network. The signal includes (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network.

As mentioned above in connection with claim 1, the cited references do not disclose a method for providing resource usage information having such steps and the rejection under 35 U.S.C. §103(a) is improper. Accordingly, claim 11 patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 11 under 35 U.S.C. §103(a) should be withdrawn. Thus, claim 11 is in allowable condition.

Because claims 12-14 and 28 depend from and further limit claim 11, claims 12-14 and 28 are in allowable condition for at least the same reasons.

Claims 15-18 and 29

Claim 15 is directed to a network node for providing resource usage information. The network node includes a network interface for connecting to a network, and a controller coupled to the network interface. The controller is configured to receive a data element from a source computer of the network through the network interface, determine that the data element is stale based on a parameter within the data element, and remove the data element from the network and send a signal to the source computer of the network through the network interface. The signal includes (i) an indication that the node of the network has removed the data element from the network,

and (ii) resource usage information describing usage of resources within the node of the network.

As mentioned above in connection with claim 1, (i) the cited references do not disclose a network node for providing resource usage information having such a controller and (ii) the rejection under 35 U.S.C. §103(a) is improper. Accordingly, claim 15 patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 15 under 35 U.S.C. §103(a) should be withdrawn. Thus, claim 15 is in allowable condition.

Because claims 16-18 and 29 depend from and further limit claim 15, claims 16-18 and 29 are in allowable condition for at least the same reasons.

Claims 19-20 and 30

Claim 19 is directed to a computer program product that includes a computer readable medium having instructions stored thereon for providing resource usage information. The instructions, when carried out by the computer, cause the computer to perform the steps of receiving a data element from a source computer of the network, determining that the data element is stale based on a parameter within the data element, and removing the data element from the network and send a signal to the source computer of the network. The signal includes (i) an indication that the node of the network has removed the data element from the network, and (ii) resource usage information describing usage of resources within the node of the network.

As mentioned above in connection with claim 1, (i) the cited prior art does not disclose a computer program product that includes a computer readable medium having instructions stored thereon for providing resource usage information as recited in claim 19, and (ii) the rejection under 35 U.S.C. §103(a) is improper. Therefore, claim 19 patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 19 under 35 U.S.C. §103(a) should be withdrawn. Thus, claim 19 is in allowable condition.

Because claims 20 and 30 depend from and further limit claim 19, claims 20 and 30 are in allowable condition for at least the same reasons.

Claims 21-24 and 31

Claim 21 is directed to a system for obtaining resource usage information. The system includes a source computer which provides a data element, and a network node, coupled to the source computer. The network node forms at least a portion of a network with the source computer. The network node is configured to receive the data element from the source computer, determine that the data element is stale based on a parameter within the data element, and remove the data element from the network and send a signal to the source computer. The signal includes (i) an indication that the network node has removed the data element from the network, and (ii) resource usage information describing usage of resources within the network node.

As mentioned above in connection with claim 1, (i) the cited references do not disclose a system having such a network node, and (ii) the rejection under 35 U.S.C. §103(a) is improper. Thus, claim 21 patentably distinguishes over the cited prior art for at least the same reasons as claim 1, and the rejection of claim 21 under 35 U.S.C. §103(a) should be withdrawn. Therefore, claim 21 is in allowable condition.

Because claims 22-24 and 31 depend from and further limit claim 5, claims 22-24 and 31 are in allowable condition for at least the same reasons.

Newly Added Claims

Claims 32-42 have been added and are believed to be in allowable condition. Claims 32-33 depend from claim 1. Claims 34-35 depend from claim 5. Claims 36-37 depend from claim 11. Claims 38-39 depend from claim 15. Claim 40 depends from claim 21. Claims 41 and 42 are independent claims.

Support for claims 32-40 is provided within the Specification, for example, on page 13, line 23-28 and page 18, lines 10-20. Support for claim 41 is provided within the Specification, for example, on page 10, line 24 through page 11, line 28 and Fig. 2. Similarly, support for claim 42 is provided within the Specification, for example, on page 16, line 11 through page 17, line 23 and Fig. 6. No new matter has been added.

Conclusion

In view of the foregoing remarks, this Application should be in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after this Amendment, that the Application is not in condition for allowance, the Examiner is respectfully requested to call the Applicants' Representative at the number below.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this Amendment, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 366-9600, in Westborough, Massachusetts.

Respectfully submitted,

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